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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,450	02/05/2004	Hirokazu Atsumori	NITT.0184	3836
7590	10/22/2007			
Stanley P. Fisher Reed Smith LLP Suite 1400 3110 Fairview Park Drive Falls Church, VA 22042-4503			EXAMINER CARLOS, ALVIN LEABRES	
			ART UNIT 4138	PAPER NUMBER
			MAIL DATE 10/22/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/771,450

Applicant(s)

ATSUMORI ET AL.

Examiner

Alvin L. Carlos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 02/05/2004, 07/10/2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

1. The following is a Final Office action in response to communications received September 18, 2007. Claim 2 has been canceled. Claims 1, 3-4 have been amended and added new claims 5-12.

#### ***Response to Amendments***

2. Applicant's amendments to the claims 1, 3-4 are sufficient to overcome the 35 USC 112, second paragraph, rejection set forth in the previous office action.

3. Applicant's amendments to the Specification are sufficient to overcome the objection to the drawing, figures 5 and 8 set forth in the previous office action.

4. Applicant's amendments to the claims 1, 3-4 are sufficient to overcome the 35 USC 102(b), rejection set forth in the previous office action.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1, 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collura 5899867 in view of deCharms 20020103429.

Re claim 1, Collura teaches a training assistant system comprising a training task presentation unit for presenting a training task and a training content (column 5 lines 49-58), a trainee's response collection unit for collecting a response (column 3 lines 61-64), a brain activity measurement unit for measuring brain activity of the trainee (column 5 lines 18-30), and an information processor for controlling presentation by training task presentation unit (column 3 lines 65-67 and column 4 lines 30-51).

However, Collura fails to teach the following limitations as taught by deCharms: Trainee having damage in the brain (paragraph 0665 lines 1-18), information processor for determining a next training task to be performed such that at least a first result of the response obtained from the trainee's response collection unit and a second result of measuring the brain activity of the trainee in a training execution process, which is obtained from said brain activity measurement unit, are used to decide the next training task to be performed (paragraph 0029 lines 1-13), brain activity measurement unit measures the brain activity at each of a plurality of regions in the brain and includes a selection unit for selecting, among said plurality of regions, a region of interest which has the damage in the brain and is used to evaluate a result of training and to determine the next training task to be performed (paragraphs 0062 and 0065).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and

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perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 3, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor controls said training task presentation unit such that a task for searching the region of interest (paragraphs 0327 and 0328).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 4, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor sets evaluation criteria for the first result of training the trainee and evaluates said first result of training the trainee based on the evaluation criteria (paragraphs 0058 and 0059).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 5, Collura teaches the invention as discussed above.

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However, Collura fails to teach the following limitations as taught by deCharms: evaluation criteria include a response time and a correct answer rate (paragraph 0654 lines 1-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 6, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor sets evaluation criteria for the second result of training the trainee and evaluates said second result of training the trainee based on the evaluation criteria (paragraph 0384 lines 1-19).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 7, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: evaluation criteria includes a change percentage in a peak value of the brain activity (paragraph 0483 lines 1-22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 8, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor sets evaluation criteria for the first and second results of training the trainee and evaluates said first and second results of training the trainee based on the evaluation criteria (paragraph 0059 lines 4-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 9, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: evaluation criteria include a response time, a correct answer rate and a change percentage in a peak value of the brain activity (paragraphs 0345-0347).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and

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perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 10, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms:

selection unit compares a first timing of the response obtained from the trainee and a plurality of second timings of the brain activity in the regions in the brain, and selects the region of interest by judging synchronism between the first timing and the second timings (paragraphs 0351 and 0352).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 11, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms:

synchronism between the first timing and the second timings is judged by using a correlation coefficient or a calculation method (paragraphs 0471 and 0485).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).



Re claim 12, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms:

training task is presented via at least images or sounds (paragraph 0096 lines 1-11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 3-12 have been considered but are moot in view of the new ground(s) of rejection.

However, as a courtesy to the applicant, the examiner notes that the applicant argues that Collura 5899867 fails to show certain features of applicant's invention. It is noted that the features upon which applicant relies (i.e., brain activity measurement unit 101 which measures the brain activity at each of a plurality of regions in the brain, and includes a selection unit for selecting, among plurality of regions, a region of interest which has the damage in the brain and used to evaluate a result of training and to determine the next training task, trainee having a damage/injury in the brain, or selecting "a region of interest which has the damage in the brain", a first result of the patient response to the first training task and a second result of measuring the brain activity during a training execution process to decide the next training task, evaluation

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criteria, including a response time, a correct answer rate and a change percentage in a peak value of the brain activity, for evaluating the first and second results, comparing a first timing of the response obtained from the trainee and a plurality of second timings of the brain activity in the regions of the brain thereby selecting the region of interest by judging synchronism between the first timing and the second timings" or "judging the synchronism between the first timing and the second timings by using a correlation coefficient or a calculation method) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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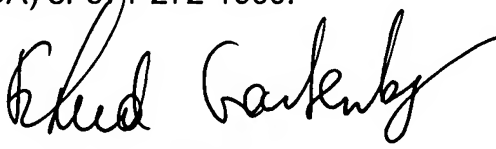
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin L. Carlos whose telephone number is 571-2703077. The examiner can normally be reached on 7:30am-5:00pm EST Mon-Fri. (alternate Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-2724828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
AC/  
10/10/2007

  
EHUD GARTENBERG  
SUPERVISORY PATENT EXAMINER  
10/10/07